

CLAIMS:

What we claim as our invention is:

1. An information service layer for data retrieval, comprising:

a control system having a registry and operable to communicate with a requestor having a request for data, the request for data including a source identifier and a data identifier;

a client service operable to register with the control system and receive the request for data, the client service further operable to communicate a requested data related to the data identifier to the requestor; and

a retrieval service operable to use at least a portion of the source identifier to retrieve the requested data related to the data identifier and communicate the requested data to the client service.

2. The information service layer of Claim 1 further comprising a request builder operable to generate the request for data based on an input.
3. The information service layer of Claim 2, wherein the request for data generateable by the request builder is further defined as an XML tag based on the input.
4. The information service layer of Claim 1, wherein the control system and the client service are operable on a mainframe.
5. The information service layer of Claim 4, wherein the retrieval service is operable on the mainframe.
6. The information service layer of Claim 4, wherein the retrieval service is operable on a non-mainframe system.

7. The information service layer of Claim 1, wherein the data identifier is further defined as desired mainframe archive output and wherein the retrieval service is further defined as a source archival retrieval service operable to retrieve the desired mainframe archive output.
8. The information service layer of Claim 1, wherein the data identifier is further defined as desired problem management system data and wherein the retrieval service is further defined as a problem management system retrieval service operable to retrieve desired problem management system data.
9. The information service layer of Claim 1, wherein the request for data from the requestor is further defined as an extensible mark-up language tag.
10. The information service layer of Claim 9, wherein the data identifier is further defined as an extensible mark-up language string having a plurality of tags identifying the a requested data.
11. The information service layer of Claim 9, wherein the source identifier is further defined as an extensible mark-up language tag identifying a source wherein the desired data is located.
12. The information service layer of Claim 1, wherein the data identifier identifies a data requested by the requestor and wherein the source identifier identifies a source and a system wherein the requested data is located.
13. The information service layer of Claim 12, wherein the source is a database.
14. The information service layer of Claim 12, wherein the source is an archival system.

15. The information service layer of Claim 12, wherein the system is a mainframe computer system.
16. The information service layer of Claim 12, wherein the system is a network server.
17. The information service layer of Claim 1, wherein the information service layer is operable on a first computer system and further comprising a second information service layer operable on a second computer system, the second information service layer having a second control system, a second retrieval service and a second client service communicating with the second control system and second retrieval service such that the client service of the information services layer communicates with the second information service layer to obtain the requested data when the requested data is associated with the second computer system.
18. The information service layer of Claim 1, wherein the control system includes a listening port operable to receive communication from the requestor.
19. The information service layer of Claim 18, wherein the control system operable to promote communication between the requestor and the client service such that the control system is operable to communicate with additional requestors.
20. The information service layer of Claim 1, wherein the client service is operable to establish a socket connection with the requestor.
21. The information service layer of Claim 20, wherein the client service is operable to establish a socket connection to promote communication directly between the client service and the requestor.

22. The information service layer of Claim 1, further comprising a plurality of client services communicating substantially simultaneously with a plurality of requestors to promote receipt of the requested data by the plurality of requestors.

23. A method of obtaining data utilizing an information service layer, comprising:

- building a request for data based on input of desired data by a requestor, the request for data including an extensible mark-up language tag;
- establishing a communication channel with the information service layer;
- notifying the information service layer by the requestor;
- registering a client service for servicing data requests in a registry of the information service layer;
- transmitting the request for data from the requestor to the information service layer;
- establishing communication between the requestor and the client service;
- calling, by the client service using at least a portion of the request for data, a retrieval service operable to obtain data;
- obtaining, by the retrieval service, a requested data based on the request for data;
- transmitting the requested data from the retrieval service to the client service;
- and
- transmitting the requested data from the client service to the requestor.

24. The method of Claim 23, further comprising:

- listening for communication from the requestor on a listening port of the information service layer; and

communicating by the information service layer with the requestor on the listening port.

25. The method of Claim 24, wherein the communication established between the requestor and the client service is defined as a separate socket connection enabling the release of the listening port such that the information service layer is operable to listen for communication from another requestor on the listening port.

26. The method of Claim 23, further comprising:

noting in the registry of the information service layer an idle state of the client service; and

placing the client service in a wait state.

27. The method of Claim 23, further comprising:

listening on a listening port for communication for the request;

establishing a socket communication with the requestor; and

passing the socket connection to the client service.

28. The method of Claim 27, further comprising:

placing the client service in a first wait state after calling the retrieval service with

the at least the portion of the request for data; and

placing the client service in a second wait state after transmitting the requested

data from the client service to the requestor; and

registering, by the client service, in the registry of the information service layer

the idle status of the client service after transmitting the requested data

from the client service to the requestor.

29. The method of Claim 28, further comprising:

starting multiple instantiations of the client service;

registering multiple instantiations of the client service with the registry of the information service layer; and

including an identifier associated with each instantiation of the client service in the registry of the information service layer.

30. The method of Claim 29, further comprising updating the registry of the information service layer to indicate that the client service is busy.

31. The method of Claim 29, wherein the identifier associated with each instantiation of the client service is further defined as a process identification associated with each client service wherein the client service is started on a mainframe computer system.

32. The method of Claim 23, further comprising calling, by the client service, a second information service layer operable on a second computer system.

33. The method of Claim 23, further comprising calling, by the information service layer, a second information service layer operable on a second computer system.

34. The method of Claim 23, further comprising maintaining by the information service layer a second registry including a plurality of retrieval services.

35. The method of Claim 34, further comprising:

determining the appropriate retrieval service based on the requested data; and

calling the appropriate retrieval service by the client service.

36. The method of Claim 35, wherein determining the appropriate retrieval service includes the information service layer using the second registry.
37. The method of Claim 35, wherein determining the appropriate retrieval service includes the client service accessing the second registry.
38. The method of Claim 35, wherein the appropriate retrieval service is associated with a second information service layer operable on a second computer system.
39. An information service layer for data retrieval, comprising:
- a control system having a registry and operable to communicate with a plurality of requestors having requests for data, each request for data including a source identifier and a data identifier;
 - a plurality of client services operable to register with the control system and receive at least one of the plurality of requests for data, the client services further operable to communicate a requested data related to the data identifier to the requestor; and
 - a plurality of retrieval services operable to communicate with at least one of the client services and to use at least a portion of the source identifier to retrieve the requested data related to the data identifier and communicate the requested data to the at least one of the client services.